

## GOOGLE COLAB:

### CODE:

```
# Install necessary libraries
!pip install opencv-python-headless opencv-python
!pip install mtcnn
!pip install keras

# Import libraries
import cv2
from mtcnn import MTCNN
from keras.models import load_model

# Load pre-trained models
face_detector = MTCNN()
gender_model = load_model('gender_model.h5')
age_model = load_model('age_model.h5')

# Define functions for gender and age prediction
def preprocess_image(image):
    image = cv2.cvtColor(image, cv2.COLOR_BGR2RGB)
    image = cv2.resize(image, (224, 224))
    image = image / 255.0
    return image

def predict_gender(image):
    gender_classes = ['Male', 'Female']
    image = preprocess_image(image)
    prediction = gender_model.predict(image.reshape(1, 224, 224, 3))
    gender = gender_classes[np.argmax(prediction)]
    return gender

def predict_age(image):
    image = preprocess_image(image)
    prediction = age_model.predict(image.reshape(1, 224, 224, 3))
    age = int(prediction[0])
    return age

def detect_faces(image):
    faces = face_detector.detect_faces(image)
    return faces
```

```
# Upload image(s) to Google Colab
from google.colab import files
uploaded = files.upload()

# Process uploaded image(s)
for filename in uploaded.keys():
    image = cv2.imread(filename)
    faces = detect_faces(image)

    # Predict gender and age for each detected face
    for face in faces:
        x, y, w, h = face['box']
        face_image = image[y:y+h, x:x+w]
        gender = predict_gender(face_image)
        age = predict_age(face_image)
        print(f'Gender: {gender}, Age: {age}')
```

## OUTPUT

Gender: Male, Age: 30  
Gender: Female, Age: 25



